

4. The tissue enclosure as in claim 1 further comprising: at least one medium surrounding the tissue.
5. The tissue enclosure as in claim 4 wherein the at least one medium comprises a gel.
6. The tissue enclosure as in claim 1 wherein a multi-dimensional printer prints the tissue into the cavity.
7. The tissue enclosure as in claim 4 wherein the at least one filter assembly comprises:
 - at least one filter;
 - at least one filter support operably coupled with the at least one filter; and
 - at least one filter frame operably coupling the at least one filter and the at least one filter support with the at least one plenum.
8. The tissue enclosure as in claim 1 further comprising: a tissue enclosure top removably enclosing the tissue within the core.
9. The tissue enclosure as in claim 1 wherein the at least one monitoring area comprises a transparent window.
10. A tissue enclosure enabling creation, maintenance, and monitoring of tissue comprising:
 - an incoming chamber admitting a first material, the incoming chamber emitting the first material in response to a differential pressure within the tissue enclosure;
 - a core including a cavity, the core having at least one monitoring area and at least one opening into the cavity, the core accommodating at least one material ingress and at least one material egress, the core containing the tissue, media, and metabolism products from the tissue;
 - at least one first filtration zone operably positioned between the incoming chamber and the core, the filtration zone subjecting the first material to at least one filter having a first pore size based at least on the first material, the filtration zone emitting first filtered contents to the core based at least on the first material and the first pore size;

- at least one second filtration zone operably coupled with the core, the at least one second filtration zone subjecting the first filtered material, the media, the tissue, and the metabolism products to at least one filter having a second pore size based at least on the first filtered material, the media, the tissue, and the metabolism products, the filtration zone emitting second filtered contents based at least on the first filtered material, the media, the tissue, the metabolism products, and the second pore size; and
 - an effluent chamber admitting the second filtered contents, the effluent chamber managing the filtered contents,
 - wherein the tissue enters the cavity through the at least one opening, and
 - wherein the tissue is confined within the cavity by the at least one first filtration zone and the at least one second filtration zone, and
 - wherein the life of the tissue is maintained by the first material entering the cavity through the at least one material ingress and by the metabolism products exiting the cavity through the at least one material egress, and
 - wherein the tissue is monitored through the at least one monitoring area.
11. The tissue enclosure as in claim 10 wherein the at least one opening enables printing of the tissue.
 12. The tissue enclosure as in claim 10 wherein the at least one monitoring area comprises:
 - a transparent window disposed opposite the at least one opening.
 13. The tissue enclosure as in claim 10 further comprising:
 - at least one mount button accommodating kinematic mounting of the tissue enclosure upon a tissue enclosure holder having corresponding mount wells.

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